IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: HSIAO, Cheng-Fang

SERIAL NO.: 10/687,141 ART UNIT: 2834

FILED: October 17, 2003 EXAMINER: NGUYEN, T.N.

TITLE: COOLING FAN STRUCTURE

AMENDMENT "A"

Director of the U.S. Patent
and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action of June 1, 2004, having a response being due by September 1, 2004, please consider the following remarks:

REMARKS

Upon entry of the present amendments, previous Claims 1 - 4 have been canceled and new Claims 5 - 8 substituted therefor. Reconsideration of the rejections, in light of the forgoing amendments present remarks, is respectfully requested. The present amendments have been entered for the purpose of distinguishing the present invention from the prior art.

In the Office Action, it was indicated that Claims 1 - 4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Brown patent in view of the Murata patent.

As an overview to the present reply, Applicant has extensively amended the language of original Claims 1 - 4 in the form of new Claims 5 - 8. New Claims 5 - 8 express the original limitations, but express such limitations in a more proper U.S. format, including proper antecedent bases and proper structural interrelationships throughout. Any indefinite terminology found in the original claims has been corrected herein. In new Claims 5 - 8 also include language that serve to more clearly distinguish the present invention from the prior art.

Initially, independent Claim 5 recites that the base has " an interior opening of a circular configuration". The ring stator is now recited as having "an annular periphery with a coil wrapped entirely therearound". The "plurality of blades" are now recited as being mounted in the interior opening of the base and in the interior of the ring stator. The "magnetic ring rotor means" is now recited as being fastened to "a side of said connection ring opposite said plurality of blades". Applicant respectfully contends that these features are neither shown nor suggested by the combination of the Brown and Murata patents.

Applicant respectfully contends that the Brown patent describes a cooling fan structure that is quite different than that of the present invention. In particular, the Brown patent does not disclose the concept of the ring stator as having a coil wrapped entirely around a periphery thereof. The coils in the Brown patent are simply placed in one location at the periphery of the ring stator. The magnetic charges produced by the coil in this location are intended to rotate the ring stator in one direction or another. This structure was recited in column 3, lines 55 - 62, of the Brown patent as follows:

> As seen at the bottom of FIG. 1, at one of its corners the stator housing 31 forms a compartment 40 housing a stator coil 41, electromagnet structure 42, a Hall effect device H1, and the

> remaining circuit elements of the commutation circuit, not shown in FIG. 1. The stator coil 41 comprises two electrically independent windings L1 and L2 concentrically wound on a bobbin 43 in bipolar fashion. A core 44 of magnetic material extends through the bobbin from end to end and forms a part of the electromagnet structure 42. Alternatively, the bobbin can be a part of the electromagnet structure.

As such, in contrast to the present invention, the Brown patent does not employ the coil wrapped around the periphery of the ring stator.

Additionally, in the Brown patent, the base is apparently identified with the reference numeral "12". The Examiner identifies this as being the "ring stator". As such, according to the Examiner, the base and the ring stator are the same item. In independent Claim 5, it specifically recited that the "ring stator is mounted in said interior opening of said base" so as to clearly indicate that the ring stator is a different item than the base. There is no indication in the Brown patent that the ring stator has "an annular periphery". As can be seen in FIG. 1 of the Brown patent, it actually appears that the "ring stator 12" has a rather square periphery. The Brown patent also fails to disclose that the "base" has an interior opening of a " circular configuration". According to the illustration of Figure 1, it appears that the ring stator of the Brown patent actually has a more "square configuration". In the Brown patent, there is no indication that the magnetic ring rotor is "fastened to a side of the connection ring opposite the plurality of blades". In the Brown patent, it actually appears that the magnetic ring rotor is directly fastened to the plurality of blades. Additionally, as the Examiner has indicated, the Brown patent does not show the "series of polar claws".

The Murata patent does disclose the use of such "polar claws". However, it does not appear that the Murata patent, in any way, discloses the use of such "polar claws" in association with a cooling fan structure. The structure indicated in the various figures of the Murata patent appears to

associated with driving shaft directly and not for driving a cooling fan structure in the nature of the present invention. In the Murata patent, there is no teaching of the "ring stator", the "plurality of blades", the "connection ring", nor the "magnetic ring rotor means". Applicant respectfully contends that the combination of the Brown and Murata patents would still lack the coil wrapped around the annular periphery of the ring stator. The combination of the Brown and Murata patents would not disclose the series of polar claws are bent along "an inner side of the ring stator opposite the coil". Additionally, and furthermore, Applicant respectfully contends that there is no teaching in the Brown patent that would suggest any reason to rely upon the teachings of the Murata patent. Any application of the Murata patent in combination with the Brown patent would be a clear hindsight analysis. This is particularly true since the Brown patent appears to use a single coil mounted at a corner of the ring stator.

Applicant notes that dependent Claims 6 - 8 correspond, respectively, to limitations of previous dependent Claims 2 - 4.

Based upon the foregoing analysis, Applicant contends that independent Claim 5 is now in proper condition for allowance. Additionally, those claims which are dependent upon Claim 5 should also be in condition for allowance. Reconsideration of the rejections and allowance of the

claims at an early date is earnestly solicited. Since no new claims have been added above those originally paid for, no additional fee is required.

Respectfully submitted,

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